

The Flora and Fauna of Virginia Army National Guard OMS No. 1 and No. 2 near Sandston, Henrico County, Virginia

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INTRODUCTION

In 2000, the Virginia Department of Military Affairs contracted with the Virginia Department of Conservation and Recreation's Division of Natural Heritage (DCR-DNH) to conduct a biological inventory of plant and animal species on the lands included in Virginia Army National Guard (VA ARNG) installations Organizational Maintenance Shop (OMS) No. 1 and No. 2, located near Sandston, Virginia. The intent of the project was to provide VA ARNG with species lists of plants and animals found on the installations so as to document the presence, distribution, and status of significant elements of biodiversity. A major focus of the study was inventory for rare species listed under the federal Endangered Species Act of 1973, as amended, the Virginia Endangered Species Act, the Virginia Endangered Plant and Insect Act, and rare plant and animal lists maintained by DCR-DNH (Roble, 2001; Townsend, 2001). The practical goal of the inventory was to assist facility personnel in decisions concerning land use and management in the event that rare, threatened, or endangered species or significant natural communities were encountered.

STUDY AREA

OMS No. 1 and No. 2 are located about 3 km SE of the town of Sandston in Henrico County, Virginia, and about 12 km ESE of Richmond. The property consists of 21.4 contiguous ha that are bordered by the Richmond International Airport to the west and by forested habitats to the north, south, and east. Other land uses in the area include low to high-density suburban development and agriculture.

The headwaters of White Oak Swamp (a creek) are located to the north of the property; this creek is a tributary of the Chickahominy River in the James River watershed. Two northeast-trending intermittent branches of White Oak Swamp cross the property. These streams and the small headwater seeps that feed them create a mosaic of forested upland and forested wetland habitats. Two vernal pools are located along these drainages. Elevations on the property range from 41 to 47 m.

The property is located within Virginia's Inner Coastal Plain physiographic province just east of the Fall Line. This province is characterized by poorly consolidated sediments eroded from highlands to the west and deeply underlain by the crystalline rocks characteristically exposed to the west in the Piedmont physiographic province. One major soil association is found on the property, Kempsville-Atlee-Duplin, which is characterized by deep, well-drained and moderately well-drained soils that have a dominantly sandy clay loam or clay subsoil (Clay, 1975). The climate of Henrico County is classified as humid subtropical, with warm to hot summers and mild winters and an average annual precipitation of 112 cm (Clay, 1975).

OMS No. 1 and No. 2 are active VA ARNG facilities used for training and light vehicle maintenance. U.S. government records indicate that the property has been owned by the U.S. Army and utilized by VA ARNG since the 1940s. Land use prior to this time is unknown (Shea & Smith, 1996).

Natural habitats within the survey area have been severely altered from pre-European settlement times, including hydrologic alterations in the form of stream channelization and ditching. Buildings and parking areas are confined to two areas on the southern and western perimeter of the property, and several roads, both paved and dirt, traverse the area. A perimeter fence surrounds the entire property, and a narrow strip along the inside of the fence is kept open by mowing. Other disturbed habitats include lawns, an infrequently-

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mowed field, and an open utility right-of-way with both upland and saturated wetland habitats.

OMS No. 1 and No. 2 lie within Braun's (1950) Oak-Pine region, which includes Virginia's southern Piedmont and the Inner Coastal Plain north of the James River. This region is generally considered a transition zone where pines characteristic of the southeastern United States become more common in oak-dominated forests east of the Appalachians. Two of Virginia's natural community types as described by Fleming et al. (2001) have been identified on the property: Mixed Oak/Heath Forest and Coastal Plain/Piedmont Acidic Seepage Swamp.

Mixed Oak/Heath Forests are oak-dominated forests of infertile uplands with submesic to xeric moisture regimes and soils that are highly acidic (nutrient poor). The presence of thick duff layers and inflammable shrubs makes this community susceptible to frequent fires and, subsequently, favors the recruitment of oaks. At OMS No. 1 and No. 2, these upland oak species are *Quercus alba* (white oak), *Q. coccinea* (scarlet oak), *Q. falcata* (southern red oak), *Q. rubra* (northern red oak), *Q. velutina* (black oak), and *Q. stellata* (post oak). Pines are also important canopy associates; at OMS No. 1 and No. 2 *Pinus taeda* (loblolly pine) and *P. virginiana* (Virginia pine) are prevalent. Hickories are usually unimportant, and no hickory species were observed during the inventory. *Acer rubrum* (red maple) and *Nyssa sylvatica* (blackgum) are prevalent in the understory, and dense colonies of heath-family plants dominate the shrub layers. At OMS No. 1 and No. 2, abundant upland ericads include *Vaccinium pallidum* (early lowbush blueberry), *V. stamineum* (deerberry), *V. fuscatum* (hairy highbush blueberry), *Gaylussacia baccata* (black huckleberry), and *Rhododendron atlanticum* (dwarf azalea). Herbaceous species are sparsely distributed (Fleming et al., 2001).

Coastal Plain/Piedmont Acidic Seepage Swamps are oligotrophic (nutrient-poor) wetlands cloaked in deciduous or mixed forests. They are found along stream headwaters and toe-slopes where groundwater is discharged as surface seepage and slowly drained away as stream flow. Drainage patterns are generally diffuse in these saturated wetlands and typically characterized by braided channels interspersed with *Sphagnum*-covered hummocks. Substrates are sandy or peaty (Fleming et al., 2001). At OMS No. 1 and No. 2, this community type is poorly developed and has been disturbed by forest clearing, stream channelization, and ditching. Canopy species there include *Acer rubrum*, *Nyssa sylvatica*, and *Pinus taeda*; small trees and shrubs include *Magnolia virginiana* (sweetbay), *Clethra alnifolia* (sweet pepperbush), *Viburnum nudum* (possum-haw), and *Vaccinium formosum* (swamp

highbush blueberry). The herb layer is diverse and rich in sedge species, including *Carex lonchocarpa* (southern long sedge), *C. seorsa* (weak stellate sedge), and *C. scoparia* (pointed broom sedge).

METHODS

Botanical

Botanical fieldwork was conducted by author AB and consisted of seven site visits between April and October 2001. A list was compiled of all plant taxa encountered at OMS No.1 and No. 2. Species that could not be identified in the field were collected and identified later using standard floras for the area, including Fernald (1950), Radford et al. (1968), and Gleason & Cronquist (1991). A draft flora in progress, (Weakley 2000), was consulted for more recent treatments. Plant specimens that represented new county records as determined by Harvill et al. (1992) and updated information provided by one of its authors (G.P. Fleming) were pressed, labeled, and deposited at the herbarium of Virginia Polytechnic Institute and State University (VPI) in Blacksburg, Virginia.

Rare plant searches focused on *Helonias bullata* (swamp-pink) and *Isotria medeoloides* (small whorled pogonia). Both of these species are listed as federally threatened and state endangered. *Helonias bullata* is known to occur in the Coastal Plain/Piedmont Acidic Seepage Swamp natural community type, and a known population is located about 10 km ESE of OMS No. 1 and No. 2 (DCR-DNH, unpublished data). *Isotria medeoloides* occurs in infertile, mesic to submesic upland forests and appears to favor areas with sparse shrub and herb layers. Coastal Plain occurrences of this orchid in Virginia are known from Williamsburg City and the following counties: Caroline, Gloucester, James City, King William, and New Kent (Ware, 1991; DCR-DNH, unpublished data). The small size of the study area allowed for intensive searches for these two plants when appropriate habitats were encountered.

Zoological

Zoological fieldwork was led by KLD and consisted of 30 site visits between April 2001 and April 2002. Inventory of animal species entailed a full complement of sampling techniques as follows:

1. Baited pitfall traps (PF) – Small 8 cm-diameter cups baited with rotting meat were buried with the rims at ground level and used for four days in June to attract carrion-feeding insects.

2. Bird surveys (BD) – Birds were inventoried using visual and aural survey techniques during three early morning (0600 h -1000h) site visits during the breeding season (May and June). In addition, owls were inventoried using tape playback calls for two nights in February.

3. Coverboards (CB) – Eight coverboards (ca. 0.6 x 1.2 m each) made of pressboard were placed in various locations at the onset of the inventory in May 2001 to assist in the survey of reptiles and amphibians. Boards were lifted during each subsequent site visit to determine the presence of targeted species.

4. Dip nets (DN) – Aquatic invertebrates were sampled with D-ring dip nets on three site visits in June and July.

5. Drift fences (DF) – Two drift fence arrays were established in May 2001 for the purpose of trapping reptiles, amphibians, small mammals, and invertebrates. Each array consisted of three 5 m lengths of aluminum flashing radiating out from a central pitfall trap made from a one-gallon can. Flashing was buried 10 cm into the ground in order to direct traveling animals towards pitfall traps that were installed at the end of each length. Pitfall traps were filled with equal parts antifreeze and 10% formalin to kill and preserve captures. A wire mesh was placed over pitfalls to discourage vertebrates from being caught, but was removed during nine trap nights of mammal trapping sessions (18-22 June, 13-16 August, 18-20 September).

6. Hand collection and visual/aural surveys (HV) – Reptiles and amphibians, as well as some invertebrates, were searched for and collected by hand in terrestrial habitats (12 hours of effort), where various cover objects were overturned in search of cryptic species. Opportunistic surveys for birds, amphibians, and mammals utilized visual and aural identification techniques.

7. Malaise trap (MA) – Flying insects were sampled with a Malaise trap set from mid-May to late August along an intermittent stream in the Coastal Plain/Piedmont Acidic Seepage Swamp community.

8. Minnow traps (MN) – Standard wire-mesh minnow traps were used to sample a variety of aquatic animals. Traps were baited with chicken livers and set overnight in shallow water for a total of seven nights in June.

9. Mist netting (MT) – Nocturnal bat surveys were conducted using 17 x 18 ft. (5.2 x 5.5 m) mist nets

placed across appropriate corridor and aquatic habitats. Nets were set up at dusk on two nights (14 August, 18 September) and checked regularly for 3-5 hours.

10. Sherman live traps (SH) – Traps for small mammals were placed along the drift fences as well as in various natural habitats. Traps were baited with oats and peanut butter and left open for a total of nine trap nights (18-22 June, 13-16 August, 18-20 September).

11. Sugaring (SU) – Some nocturnal insects that are not attracted to UV-light come to bait. The bait used was a mixture of fermented beer, fruit, and sugar, which was applied to tree trunks during the two mist netting sessions. Moths were collected with a kill-jar and non-lepidopterans were collected in alcohol.

12. Sweep nets (SW) – Lepidopterans, odonates, tiger beetles, and other flying invertebrates were sampled opportunistically on most site visits to both terrestrial and aquatic habitats using sweep nets.

13. UV-Light traps (UV) – Nocturnal lepidopterans and other invertebrates were captured using standard bucket traps equipped with a blacklight (= ultraviolet) powered by a 12-volt gel-cell battery with ethyl acetate used as a killing agent. Traps were run overnight in a variety of habitats for twelve trap nights during the May-October period. During the two mist netting sessions, a UV-light was used with a white sheet. Moths attracted to the sheet were collected in a kill-jar and non-lepidopterans were collected in alcohol.

All invertebrate specimens collected during the study were preserved using standard methods (Martin, 1977). All lepidopterans were mounted on pins, odonates were preserved with acetone and stored in glassine envelopes, and other insects were stored in 70% isopropyl alcohol. Frogs and toads were the only vertebrate specimens collected from the pitfall traps; specimens were transferred to 35% isopropyl alcohol. Most specimens have been or will be deposited in the Virginia Museum of Natural History; some specimens may be deposited in the National Museum of Natural History and the reference collection (primarily Lepidoptera and Odonata) of DCR-DNH.

RESULTS AND DISCUSSION

Botanical

A total of 325 vascular plant species and subspecific taxa was recorded for OMS No. 1 and No. 2 (Table 1). These taxa are contained within 189 genera

and 70 families. Four families, the Poaceae (55 taxa), Asteraceae (47 taxa), Cyperaceae (33 taxa), and Fabaceae (22 taxa) comprise 48.3% of the flora. *Carex* is by far the largest genus with 17 taxa. The 66 non-native taxa represent 20.3% of the flora.

Included among the non-native taxa is a new Virginia state record, *Cerastium dubium* (doubtful mouse-ear chickweed). This weedy species has previously been reported in North America from Illinois, Ohio, Kentucky, Tennessee, Arkansas, Mississippi, Oregon, Washington, and Idaho (Kartesz, 1999; Chester & Wofford, 2000). It is native to western France and Sicily to central Russia (Shildneck & Jones, 1986). Thirteen new Henrico County records were collected (Table 1).

Neither *Helonias bullata* nor *Isotria medeoloides* was found during the survey. The Coastal Plain/Piedmont Acidic Seepage Swamp community at OMS No. 1 and No. 2 is small and poorly developed. There did not appear to be sufficient seepage to support *Helonias*. Uplands at the study site are mostly cloaked in a dense ericaceous shrub layer; thus, it is not surprising that *Isotria* was not found. No other rare, threatened, or endangered plant taxa were located during the inventory.

Zoological

Sixty-eight species of vertebrates were identified at OMS No. 1 and No. 2 during the course of the inventory, including 9 amphibians, 8 reptiles, 3 fish, 42 birds, and 6 mammals (Table 2). Two groups that are not well represented in the results are salamanders and small mammals. No salamanders were discovered on the property despite extensive searches. The year of the survey was particularly dry, and this may account for the difficulty of locating salamanders on the surface. Small mammals are typically difficult to inventory and often require many trap nights for few captures. It is likely that other species of mice, voles, and shrews exist on the property, but only the white-footed mouse (*Peromyscus leucopus*) was captured.

Vertebrate species associated with aquatic habitats (fish, aquatic turtles, and frogs) were located exclusively in the semipermanently flooded habitats of a tributary to White Oak Swamp. All other vertebrates identified during the inventory were common throughout the study area, showing little habitat

specificity. No rare, threatened, or endangered species of vertebrates were expected from the survey area based on available habitats and regional patterns, and all vertebrate species identified in the inventory are considered common in the region. No new county records of vertebrates resulted from the inventory.

The majority of Lepidoptera and Odonata captured during the inventory have been identified, yielding 124 species of Lepidoptera, 16 of which were new county record butterflies and skippers (Opler et al., 1995), and 20 species of Odonata, including seven new county records (Carle, 1982; Table 2). Dragonfly species collected included *Libellula flavida* (yellow-sided skimmer), an uncommon species in Virginia (Carle, 1982). Numerous other invertebrates were collected but will not be identified in the near future due to funding and expertise constraints. No rare, threatened, or endangered species of invertebrates were identified during the inventory.

The method of inventory that yielded the greatest number of species was hand collection and visual surveys (i.e., opportunistic searching). Nevertheless, nine of the vertebrate species were captured with an intensive trapping method, such as the drift fence arrays, mist nets, or minnow traps, thus justifying continued use of labor- and material-intensive methods in comprehensive inventories.

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Table 1. Flora of Virginia Army National Guard OMS No. 1 and No. 2 identified during DCR-DNH inventory, 2001. The list is arranged by major plant groups: Pteridophyta (ferns and fern allies), Gymnospermae (non-flowering seed plants), and Angiospermae (flowering plants). The Angiospermae are further divided into the Dicotyledoneae and Monocotyledoneae. Within each major group, families, genera, species, and subtaxa are arranged alphabetically. Nomenclature and common names follow Kartesz (1999) with the exception of *Setaria pumila* (Poir.) Roemer & J.A. Schultes ssp. *pumila*, where it appears that the Kartesz name, *Pennisetum glaucum* (L.) R. Br., is in error (A. Weakley, pers. comm.). Synonyms, shown following an equal sign (=), are provided for some taxa where Kartesz (1999) departs sharply from other familiar sources. Non-native taxa, as determined from a consensus of the standard regional floras, are preceded by an asterisk (*). Dates are listed as month-day-year. The last column shows the Allen Belden Jr. collection number for specimens deposited at VPI to voucher new Henrico County plant records.

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
PTERIDOPHYTA			
BLECHNACEAE			
<i>Woodwardia areolata</i> (L.) T. Moore	Netted chain fern	04-25-01	
DENNSTAEDTIACEAE			
<i>Dennstaedtia punctilobula</i> (Michx.) T. Moore	Eastern hay-scented fern	10-03-01	
<i>Pteridium aquilinum</i> (L.) Kuhn	Northern bracken fern	04-25-01	
DRYOPTERIDACEAE			
<i>Athyrium filix-femina</i> (L.) Roth ssp. <i>aspennioides</i> (Michx.) Hultén	Subarctic lady fern	05-23-01	
<i>Onoclea sensibilis</i> L.	Sensitive fern	05-23-01	
<i>Polystichum acrostichoides</i> (Michx.) Schott	Christmas fern	05-23-01	
LYCOPODIACEAE			
<i>Lycopodium digitatum</i> Dill. ex A. Braun	Fan ground-pine	05-23-01	
<i>Lycopodium obscurum</i> L.	Princess-pine	04-25-01	
OPHIOGLOSSACEAE			
<i>Botrychium dissectum</i> Spreng.	Cut-leaf grape fern	09-05-01	
OSMUNDACEAE			
<i>Osmunda cinnamomea</i> L.	Cinnamon fern	04-25-01	
<i>Osmunda regalis</i> L. var. <i>spectabilis</i> (Willd.) Gray	Royal fern	10-10-01	
THELYPTERIDACEAE			
<i>Thelypteris noveboracensis</i> (L.) Nieuwl.	New York fern	10-03-01	
GYMNOSPERMAE			
CUPRESSACEAE			
<i>Juniperus virginiana</i> L.	Eastern red-cedar	04-19-01	
PINACEAE			
<i>Pinus taeda</i> L.	Loblolly pine	04-25-01	
<i>Pinus virginiana</i> P. Mill.	Virginia pine	04-25-01	
ANGIOSPERMAE: DICOTYLEDONEAE			
ACERACEAE			
<i>Acer rubrum</i> L.	Red maple	04-25-01	
ANACARDIACEAE			
<i>Rhus copallinum</i> L. var. <i>latifolia</i> Engl.	Winged sumac	05-23-01	
<i>Toxicodendron radicans</i> (L.) Kuntze	Eastern poison-ivy	04-25-01	
APIACEAE			
* <i>Daucus carota</i> L.	Queen Anne's lace	07-03-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
APOCYNACEAE			
<i>Apocynum cannabinum</i> L.	Indian-hemp	04-25-01	
<i>Trachelospermum difforme</i> (Walt.) Gray	Climbing-dogbane	07-03-01	
AQUIFOLIACEAE			
<i>Ilex opaca</i> Ait.	American holly	04-19-01	
<i>Ilex verticillata</i> (L.) Gray	Common winterberry	10-03-01	
ASCLEPIADACEAE			
<i>Asclepias tuberosa</i> L.	Butterfly milkweed	07-03-01	
ASTERACEAE			
* <i>Achillea millefolium</i> L.	Common yarrow	04-25-01	
<i>Ambrosia artemisiifolia</i> L.	Annual ragweed	09-05-01	
<i>Arnica acaulis</i> (Walt.) B.S.P.	Common leopardbane	04-25-01	
<i>Bidens aristosa</i> (Michx.) Britt.	Bearded beggarticks	09-05-01	
= <i>Bidens polylepis</i> Blake			
<i>Bidens bipinnata</i> L.	Spanish-needles	10-10-01	
* <i>Centaurea biebersteinii</i> DC.	Spotted knapweed	07-03-01	
= <i>Centaurea maculosa</i> auct. non Lam.			
* <i>Centaurea cyaneus</i> L.	Garden cornflower	05-23-01	
<i>Conyza canadensis</i> (L.) Cronq.	Canadian horseweed	09-05-01	
= <i>Erigeron canadensis</i> L.			
<i>Coreopsis verticillata</i> L.	Whorled tickseed	04-25-01	
<i>Elephantopus carolinianus</i> Raeusch.	Carolina elephant's-foot	10-03-01	
<i>Erechtites hieracifolia</i> (L.) Raf. ex DC.	American burnweed	09-05-01	
<i>Erigeron annuus</i> (L.) Pers.	Eastern daisy fleabane	07-03-01	
<i>Erigeron strigosus</i> Muhl. ex Willd.	Prairie fleabane	07-03-01	
<i>Eupatorium capillifolium</i> (Lam.)	Small dog-fennel	04-25-01	
<i>Eupatorium dubium</i> Willd. ex Poir.	Coastal-Plain Joe-Pye-weed	07-03-01	
<i>Eupatorium hyssopifolium</i> L. var. <i>hyssopifolium</i>	Hyssop-leaf thoroughwort	10-10-01	
<i>Eupatorium hyssopifolium</i> L. var. <i>laciniatum</i> Gray	Hyssop-leaf thoroughwort	07-03-01	
<i>Eupatorium perfoliatum</i> L.	Common boneset	05-23-01	
<i>Eupatorium pilosum</i> Walt.	Rough boneset	07-03-01	
<i>Eupatorium rotundifolium</i> L. var. <i>ovatum</i> (Bigelow) Torr.	Round-leaf thoroughwort	05-23-01	
= <i>Eupatorium pubescens</i> Muhl. ex Willd.			
<i>Eurybia compacta</i> Nesom	Savannah wood-aster	09-05-01	
= <i>Aster gracilis</i> Nutt.			
<i>Euthamia caroliniana</i> (L.) Greene ex Porter & Britt.	Slender goldentop	09-05-01	
= <i>Solidago tenuifolia</i> Pursh			
<i>Euthamia graminifolia</i> (L.) Greene	Flat-top goldentop	09-05-01	
= <i>Solidago graminifolia</i> (L.) Salisb.			
<i>Gamochaeta purpurea</i> (L.) Cabrera	Spoon-leaf purple everlasting	04-25-01	
= <i>Gnaphalium purpureum</i> L.			
<i>Helenium flexuosum</i> Raf.	Purple-head sneezeweed	07-03-01	
<i>Hieracium gronovii</i> L.	Queendevil	09-05-01	
* <i>Hypochaeris radicata</i> L.	Hairy cat's-ear	04-25-01	
<i>Krigia virginica</i> (L.) Willd.	Virginia dwarf-dandelion	04-19-01	
<i>Lactuca canadensis</i> L.	Florida blue lettuce	07-03-01	
* <i>Leucanthemum vulgare</i> Lam.	Oxy-eye daisy	04-25-01	
= <i>Chrysanthemum leucanthemum</i> L.			
<i>Mikania scandens</i> (L.) Willd.	Climbing hempvine	05-23-01	
<i>Packera anomyma</i> (Wood) W.A. Weber & A. Löve	Small's groundsel	04-25-01	
= <i>Senecio anomymus</i> Wood			
<i>Pluchea camphorata</i> (L.) DC.	Plowman's-wort	09-05-01	
<i>Pseudognaphalium obtusifolium</i> (L.) Hilliard & Burt	Blunt-leaf rabbit-tobacco	09-05-01	
= <i>Gnaphalium obtusifolium</i> L.			
<i>Pyrrhopappus carolinianus</i> (Walt.) DC.	Carolina desert-chicory	07-03-01	
<i>Sericocarpus linifolius</i> (L.) B.S.P.	Narrow-leaf white-top-aster	07-03-01	
= <i>Aster solidagineus</i> Michx.			
<i>Solidago altissima</i> L.	Tall goldenrod	09-05-01	
<i>Solidago nemoralis</i> Ait.	Gray goldenrod	09-05-01	
<i>Solidago pinetorum</i> Small	Small's goldenrod	07-03-01	
<i>Solidago puberula</i> Nutt. var. <i>pulverulenta</i>	Downy goldenrod	09-05-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
ASTERACEAE (continued)			
<i>Solidago rugosa</i> P. Mill.	Wrinkle-leaf goldenrod	09-05-01	
<i>Symphotrichum grandiflorum</i> (L.) Nesom = <i>Aster grandiflorus</i> L.	Large-flower American-aster	10-10-01	
<i>Symphotrichum lanceolatum</i> (Willd.) Nesom = <i>Aster lanceolatus</i> Willd.	White paniced American-aster	10-03-01	
<i>Symphotrichum lateriflorum</i> (L.) A.& D. Löve = <i>Aster lateriflorus</i> (L.) Britt.	Farewell-summer	10-10-01	
<i>Symphotrichum pilosum</i> (Willd.) Nesom = <i>Aster pilosus</i> Willd.	White oldfield American-aster	10-03-01	
* <i>Taraxacum officinale</i> G.H. Weber ex Wiggers	Common dandelion	04-19-01	
<i>Vermonia noveboracensis</i> (L.) Michx.	New York ironweed	10-03-01	
BETULACEAE			
<i>Betula nigra</i> L.	River birch	04-25-01	
BIGNONIACEAE			
<i>Campsis radicans</i> (L.) Seem. ex Bureau	Trumpet-creeper	04-25-01	
BORAGINACEAE			
<i>Myosotis verna</i> Nutt.	Spring forget-me-not	04-25-01	
BRASSICACEAE			
* <i>Arabidopsis thaliana</i> (L.) Heynh.	Thalecress	04-25-01	
* <i>Barbarea vulgaris</i> Ait. f.	Garden yellow-rocket	04-19-01	
* <i>Cardamine hirsuta</i> L.	Hairy bittercress	04-25-01	
<i>Draba brachycarpa</i> Nutt. ex Torr. & Gray	Short-pod whitlow-grass	04-25-01	
<i>Lepidium virginicum</i> L.	Poorman's-pepperwort	04-25-01	
* <i>Microthlaspi perfoliatum</i> (L.) F.K. Mey. = <i>Thlaspi perfoliatum</i> L.	Pennycress	04-19-01	
* <i>Teesdalia nudicaulis</i> (L.) Ait. f.	Common shepherd's-cress	04-25-01	
* <i>Thlaspi alliaceum</i> L.	Roadside Pennycress	04-19-01	AB 1896
CAMPANULACEAE			
<i>Lobelia inflata</i> L.	Indian-tobacco	09-05-01	
<i>Lobelia nuttallii</i> J.A. Schultes	Nuttall's lobelia	07-03-01	
<i>Triodanis perfoliata</i> (L.) Nieuwl. = <i>Specularia perfoliata</i> (L.) A. DC.	Clasping-leaf Venus'-looking-glass	05-23-01	
CAPRIFOLIACEAE			
* <i>Lonicera japonica</i> Thunb.	Japanese honeysuckle	04-19-01	
<i>Sambucus nigra</i> ssp. <i>canadensis</i> (L.) R. Bolli = <i>Sambucus canadensis</i> L.	Black elder	10-03-01	
<i>Viburnum dentatum</i> L.	Southern arrow-wood	05-23-01	
<i>Viburnum nudum</i> L.	Possumhaw	04-19-01	
CARYOPHYLLACEAE			
* <i>Cerastium dubium</i> (Bast.) Guépin	Doubtful mouse-ear chickweed	04-19-01	AB 1899 State record
* <i>Scleranthus annuus</i> L.	Annual knawel	04-25-01	
* <i>Stellaria media</i> (L.) Vill.	Common chickweed	04-19-01	
CISTACEAE			
<i>Lechea minor</i> L.	Thyme-leaf pinweed	09-05-01	
CLETHRACEAE			
<i>Clethra alnifolia</i> L.	Coastal sweet-pepperbush	04-19-01	
CLUSIACEAE			
<i>Hypericum canadense</i> L.	Lesser Canadian St. John's-wort	07-03-01	
<i>Hypericum gentianoides</i> (L.) B.S.P.	Orange-grass	04-25-01	
<i>Hypericum hypericoides</i> (L.) Crantz ssp. <i>hypericoides</i>	St. Andrew's-cross	05-23-01	
<i>Hypericum hypericoides</i> (L.) Crantz ssp. <i>multicaule</i> (Michx. ex Willd.) Robson = <i>Hypericum stragulum</i> P. Adams & Robson	St. Andrew's-cross	04-25-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
CLUSIACEAE (continued)			
<i>Hypericum nuttium</i> L.	Dwarf St. John's-wort	07-03-01	
<i>Hypericum perforatum</i> L.	Common St. John's-wort	05-23-01	
<i>Hypericum punctatum</i> Lam.	Spotted St. John's-wort	07-03-01	
CONVOLVULACEAE			
<i>Ipomoea pandurata</i> (L.) G.F.W. Mey.	Man-of-the-earth	09-05-01	
CORNACEAE			
<i>Cornus florida</i> L.	Flowering dogwood	04-19-01	
<i>Nyssa sylvatica</i> Marsh.	Black tupelo	04-25-01	
EBENACEAE			
<i>Diospyros virginiana</i> L.	Common persimmon	10-03-01	
ERICACEAE			
<i>Gaylussacia baccata</i> (Wangenh.) K. Koch	Black huckleberry	04-25-01	
<i>Gaylussacia frondosa</i> (L.) Torr. & Gray ex Torr.	Blue huckleberry	04-25-01	
<i>Leucothoe racemosa</i> (L.) Gray	Swamp doghobble	04-19-01	
<i>Lyonia mariana</i> (L.) D. Don	Piedmont Staggerbush	05-23-01	
<i>Rhododendron atlanticum</i> (Ashe) Rehd.	Dwarf azalea	04-25-01	
<i>Vaccinium fornuosum</i> Andr.	Southern blueberry	04-19-01	
<i>Vaccinium fuscum</i> Ait.	Black blueberry	04-19-01	
<i>Vaccinium pallidum</i> Ait.	Early lowbush blueberry	04-19-01	
<i>Vaccinium stamineum</i> L.	Deerberry	04-19-01	
EUPHORBIACEAE			
<i>Acalypha gracilens</i> Gray	Slender three-seed-mercury	10-03-01	
<i>Acalypha rhomboidea</i> Raf.	Common three-seed-mercury	09-05-01	
<i>Chamaesyce maculata</i> (L.) = <i>Euphorbia maculata</i> L.	Small spotted sandmat	07-03-01	
<i>Chamaesyce nutans</i> (Lag.) Small = <i>Euphorbia nutans</i> Lag.	Eyebane	09-05-01	
FABACEAE			
* <i>Albizia julibrissin</i> Durazz.	Silktree	05-23-01	
<i>Apios americana</i> Medik.	Groundnut	07-03-01	
<i>Chamaecrista fasciculata</i> (Michx.) Greene = <i>Cassia fasciculata</i> Michx.	Sleepingplant	07-03-01	
<i>Chamaecrista nictitans</i> (L.) Moench = <i>Cassia nictitans</i> L.	Partridge-pea	09-05-01	
<i>Desmodium glabellum</i> (Michx.) DC.	Dillenius' tick-trefoil	09-05-01	
<i>Desmodium paniculatum</i> (L.) DC.	Panicled-leaf tick-trefoil	09-05-01	
* <i>Kummerowia stipulacea</i> (Maxim.) Makino = <i>Lespedeza stipulacea</i> Maxim.	Korean-clover	09-05-01	
* <i>Kummerowia striata</i> (Thunb.) Schindl. = <i>Lespedeza striata</i> (Thunb.) Hook. & Arn.	Japanese-clover	07-03-01	AB 1943
* <i>Lespedeza cuneata</i> (Dum.-Cours.) G. Don	Chinese bush-clover	04-25-01	
<i>Lespedeza procumbens</i> Michx.	Trailing bush-clover	09-05-01	
<i>Lespedeza repens</i> (L.) W. Bart.	Creeping bush-clover	09-05-01	
<i>Lespedeza virginica</i> (L.) Britt.	Slender bush-clover	09-05-01	
* <i>Melilotus officinalis</i> (L.) Lam.	Yellow sweet-clover	05-23-01	
<i>Stylosanthes biflora</i> (L.) B.S.P.	Side-beak pencil-flower	09-05-01	
<i>Tephrosia virginiana</i> (L.) Pers.	Goat's-rue	07-03-01	
* <i>Trifolium arvense</i> L.	Rabbit-foot clover	07-03-01	
* <i>Trifolium campestre</i> Schreb.	Lesser hop clover	05-23-01	
* <i>Trifolium dubium</i> Sibthorp	Suckling clover	04-25-01	
* <i>Trifolium pratense</i> L.	Red clover	09-05-01	
* <i>Trifolium repens</i> L.	White clover	04-25-01	
* <i>Vicia lathyroides</i> L.	Spring vetch	04-25-01	
* <i>Vicia sativa</i> L.	Garden vetch	04-25-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
FAGACEAE			
<i>Castanea pumila</i> (L.) P. Mill.	Allegheny-chinkapin	05-23-01	
<i>Quercus alba</i> L.	Northern white oak	04-25-01	
<i>Quercus coccinea</i> Muenchh.	Scarlet oak	10-03-01	
<i>Quercus falcata</i> Michx.	Southern red oak	04-25-01	
<i>Quercus nigra</i> L.	Water oak	04-25-01	
<i>Quercus phellos</i> L.	Willow oak	04-25-01	
<i>Quercus rubra</i> L.	Northern red oak	04-25-01	
<i>Quercus stellata</i> Wangenh.	Post oak	10-10-01	
<i>Quercus velutina</i> Lam.	Black oak	05-23-01	
GENTIANACEAE			
<i>Gentiana saponaria</i> L.	Harvestbells	10-03-01	
GERANIACEAE			
* <i>Geranium dissectum</i> L.	Cut-leaf crane's-bill	05-23-01	AB 1903
GROSSULARIACEAE			
<i>Itea virginica</i> L.	Virginia sweetspire	05-23-01	
HAMAMELIDACEAE			
<i>Liquidambar styraciflua</i> L.	Sweet-gum	04-19-01	
LAMIACEAE			
* <i>Lanium purpureum</i> L.	Red henbit	04-25-01	
<i>Lycopus virginicus</i> L.	Virginia water-horehound	09-05-01	
* <i>Prunella vulgaris</i> L.	Common selfheal	09-05-01	
<i>Scutellaria integrifolia</i> L.	Helmet-flower	05-23-01	
LAURACEAE			
<i>Sassafras albidum</i> (Nutt.) Nees	Sassafras	04-19-01	
LINACEAE			
<i>Linum medium</i> (Planch.) Britt. var. <i>texanum</i> (Planch.) Fern.	Stiff yellow flax	07-03-01	
MAGNOLIACEAE			
<i>Magnolia virginiana</i> L.	Sweet-bay	04-19-01	
MELASTOMATACEAE			
<i>Rhexia uariana</i> L.	Maryland meadow-beauty	07-03-01	
<i>Rhexia virginica</i> L.	Handsome-Harry	07-03-01	
OLEACEAE			
* <i>Ligustrum sinense</i> Lour.	Chinese privet	10-03-01	
ONAGRACEAE			
<i>Ludwigia alternifolia</i> L.	Seedbox	07-03-01	
<i>Ludwigia palustris</i> (L.) Ell.	Marsh primrose-willow	07-03-01	
OXALIDACEAE			
* <i>Oxalis corniculata</i> L.	Creeping yellow wood-sorrel	05-23-01	
<i>Oxalis dillenii</i> Jacq.	Slender yellow wood-sorrel	05-23-01	
PHYTOLACCACEAE			
<i>Phytolacca americana</i> L.	American pokeweed	07-03-01	
PLANTAGINACEAE			
<i>Plantago aristata</i> Michx.	Large-bract plantain	07-03-01	
* <i>Plantago lanceolata</i> L.	English plantain	04-25-01	
<i>Plantago virginica</i> L.	Pale-seed plantain	04-25-01	
POLYGALACEAE			
<i>Polygala curtissii</i> Gray	Curtiss' milkwort	10-03-01	

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POLYGONACEAE			
* <i>Polygonum caespitosum</i> Blume var. <i>longisetum</i> (de Bruyn) A.N. Steward	Oriental lady's-thumb	09-05-01	
<i>Polygonum hydropiperoides</i> Michx.	Swamp smartweed	10-30-01	
<i>Polygonum pennsylvanicum</i> L.	Pinkweed	10-10-01	
<i>Polygonum punctatum</i> Ell.	Dotted smartweed	10-03-01	
* <i>Rumex acetosella</i> L.	Common sheep sorrel	04-25-01	
* <i>Rumex crispus</i> L.	Curly dock	04-25-01	
* <i>Rumex obtusifolius</i> L.	Bitter dock	05-23-01	
PRIMULACEAE			
* <i>Anagallis arvensis</i> L.	Scarlet pimpernel	09-05-01	
<i>Lysimachia quadrifolia</i> L.	Whorled yellow-loosestrife	05-23-01	
PYROLACEAE			
<i>Chimaphila maculata</i> (L.) Pursh	Striped prince's-pine	04-19-01	
RANUNCULACEAE			
<i>Clematis virginiana</i> L.	Devil's-darning-needles	05-23-01	
<i>Ranunculus bulbosus</i> L.	St. Anthony's-turnip	04-25-01	
ROSACEAE			
<i>Amelanchier canadensis</i> (L.) Medik.	Canadian service-berry	04-19-01	
<i>Duchesnea indica</i> (Andr.) Focke	Indian-strawberry	04-25-01	
<i>Photinia pyrifolia</i> (Lam.) Robertson & Phipps = <i>Aronia arbutifolia</i> (L.) Pers. = <i>Pyrus arbutifolia</i> (L.) L. f.	Red chokeberry	04-19-01	
<i>Potentilla canadensis</i> L.	Dwarf cinquefoil	04-25-01	
<i>Potentilla simplex</i> Michx.	Oldfield cinquefoil	04-25-01	
<i>Prunus serotina</i> Ehrh.	Black cherry	04-25-01	
<i>Rubus argutus</i> Link	Saw-tooth blackberry	05-23-01	
<i>Rubus cuneifolius</i> Pursh	Sand blackberry	07-03-01	
<i>Rubus flagellaris</i> Willd.	Whiplash dewberry	07-03-01	
<i>Rubus scambens</i> Bailey	Springtime dewberry	10-03-01	
RUBIACEAE			
<i>Cephalanthus occidentalis</i> L.	Common buttonbush	10-10-01	
<i>Diodia teres</i> Walt.	Poorjoe	04-25-01	
<i>Houstonia caerulea</i> L. = <i>Hedyotis caerulea</i> (L.) Hook.	Quaker-ladies	04-25-01	
<i>Houstonia pusilla</i> Schoepf = <i>Hedyotis crassifolia</i> Raf.	Tiny bluet	04-25-01	AB 1897
<i>Mitchella repens</i> L.	Partridge-berry	04-19-01	
SALICACEAE			
<i>Populus grandidentata</i> Michx.	Big-tooth aspen	05-23-01	
<i>Salix humilis</i> Marsh.	Prairie willow	04-19-01	
<i>Salix nigra</i> Marsh.	Black willow	04-25-01	
SCROPHULARIACEAE			
<i>Agalinis purpurea</i> (L.)	Pennell purple false foxglove	10-03-01	
<i>Nuttallanthus canadensis</i> (L.) D.A. Sutton = <i>Linaria canadensis</i> (L.) Chaz.	Oldfield-toadflax	04-25-01	
* <i>Veronica arvensis</i> L.	Corn speedwell	04-25-01	
* <i>Veronica hederifolia</i> L.	Ivy-leaf speedwell	04-25-01	
<i>Veronica officinalis</i> L.	Common gypsyweed	04-25-01	
<i>Veronica peregrina</i> L.	Neckweed	04-25-01	
* <i>Veronica persica</i> Poir.	Bird-eye speedwell	04-25-01	
SOLANACEAE			
<i>Solanum carolinense</i> L.	Carolina horse-nettle	07-03-01	
TYPHACEAE			
<i>Typha latifolia</i> L.	Broad-leaf cat-tail	09-05-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
URTICACEAE			
<i>Boehmeria cylindrica</i> (L.) Sw.	Small-spike false nettle	10-03-01	
VALERIANACEAE			
* <i>Valerianella locusta</i> (L.) Lat.	Lamb's-lettuce	04-25-01	
VIOLACEAE			
* <i>Viola arvensis</i> Murr.	European field pansy	04-25-01	
<i>Viola bicolor</i> Pursh	Field pansy	04-19-01	
<i>Viola cucullata</i> Ait.	Marsh blue violet	04-19-01	
<i>Viola</i> × <i>primulifolia</i> L. (pro sp.) [<i>lanceolata</i> × <i>macloskeyi</i>] = <i>Viola primulifolia</i> L.	Primrose-leaved violet	04-19-01	
VITACEAE			
<i>Parthenocissus quinquefolia</i> (L.) Planch.	Virginia-creeper	04-19-01	
<i>Vitis cinerea</i> (Engelm.) Millard var. <i>floridana</i> Munson	Gray-bark grape	10-03-01	AB 1937
<i>Vitis rotundifolia</i> Michx.	Muscadine	04-25-01	
ANGIOSPERMAE: MONOCOTYLEDONEAE			
COMMELINACEAE			
* <i>Commelina communis</i> L.	Asiatic dayflower	09-05-01	
* <i>Murdannia keisak</i> (Hassk.) Hand.-Maz.	Wart-removing-herb	05-23-01	
CYPERACEAE			
<i>Carex alata</i> Torr.	Broad-wing sedge	05-23-01	
<i>Carex albicans</i> Willd. ex Spreng.	White-tinge sedge	05-23-01	
<i>Carex blanda</i> Dewey	Eastern woodland sedge	05-23-01	
<i>Carex bullata</i> Schkuhr ex Willd.	Button sedge	05-23-01	
<i>Carex criiita</i> Lam.	Fringed sedge	05-23-01	
<i>Carex debilis</i> Michx.	White-edge sedge	05-23-01	
<i>Carex frankii</i> Kunth	Frank's Sedge	07-03-01	
<i>Carex hirsutella</i> Mackenzie = <i>Carex complanata</i> Torr. & Hook. var. <i>hirsuta</i> (Willd.) Gleason	Fuzzy-wuzzy sedge	05-23-01	
<i>Carex intumescens</i> Rudge	Greater bladder sedge	05-23-01	
<i>Carex joorii</i> Bailey	Cypress-swamp sedge	10-10-01	
<i>Carex lonchocarpa</i> Willd. = <i>Carex folliculata</i> L. var. <i>australis</i> Bailey	Southern long sedge	05-23-01	
<i>Carex longii</i> Mackenzie	Long's sedge	05-23-01	
<i>Carex louisianica</i> Bailey	Louisiana sedge	10-10-01	
<i>Carex lucida</i> Wahlenb.	Sallow sedge	05-23-01	
<i>Carex scoparia</i> Schkuhr ex Willd.	Pointed broom sedge	05-23-01	
<i>Carex seorsa</i> Howe	Weak stellate sedge	05-23-01	
<i>Carex vulpinoidea</i> Michx.	Common fox sedge	05-23-01	
<i>Cyperus echinatus</i> (L.) Wood = <i>Cyperus ovalaris</i> (Michx.) Torr.	Globe flat sedge	07-03-01	
* <i>Cyperus iria</i> L.	Ricefield flat sedge	09-05-01	
<i>Cyperus pseudovegetus</i> Steud.	Marsh flat sedge	07-03-01	
<i>Cyperus strigosus</i> L.	Straw-color flat sedge	09-05-01	
<i>Eleocharis obtusa</i> (Willd.) J.A. Schultes = <i>Eleocharis ovata</i> (Roth) Roemer & J. A. Schultes var. <i>obtusa</i> (Willd.) Kükenth.	Blunt spike-rush	09-05-01	
<i>Eleocharis tenuis</i> (Willd.) J.A. Schultes	Slender spike-rush	05-23-01	
<i>Eleocharis tuberculosa</i> (Michx.) Roemer & J.A. Schultes	Cone-cup spike-rush	10-03-01	
* <i>Fimbristylis amua</i> (All.) Roemer & J.A. Schultes	Annual fimbry	09-05-01	
<i>Fimbristylis autumnalis</i> (L.) Roemer & J.A. Schultes	Slender fimbry	09-05-01	
<i>Rhynchospora capitellata</i> (Michx.) Vahl	Brownish beak sedge	09-05-01	
<i>Rhynchospora coriuculata</i> (Lam.) Gray	Short-bristle horned beak sedge	10-03-01	AB 1932
<i>Rhynchospora glomerata</i> (L.) Vahl	Clustered beak sedge	10-03-01	AB 1942
<i>Rhynchospora inexpansa</i> (Michx.) Vahl	Nodding beak sedge	07-03-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
CYPERACEAE (continued)			
<i>Rhynchospora recognita</i> (Gale) Kral = <i>Rhynchospora globularis</i> (Chapman) Small var. <i>recognita</i> Gale	Coarse globe beak sedge	10-10-01	
<i>Scirpus cyperinus</i> (L.) Kunth	Cottongrass bulrush	09-05-01	
<i>Scirpus georgianus</i> Harper	Georgia bulrush	07-03-01	
IRIDACEAE			
<i>Sisyrinchium angustifolium</i> P. Mill.	Narrow-leaf blue-eyed-grass	05-23-01	
JUNCACEAE			
<i>Juncus acuminatus</i> Michx.	Knotty-leaf rush	07-03-01	
<i>Juncus canadensis</i> J. Gay ex Laharpe	Canadian rush	09-05-01	
<i>Juncus dichotomus</i> Ell.	Forked rush	07-03-01	AB 1910
<i>Juncus effusus</i> L.	Lamp rush	07-03-01	
<i>Juncus marginatus</i> Rostk.	Grass-leaf rush	07-03-01	
<i>Juncus scirpoides</i> Lam.	Needle-pod rush	10-10-01	
<i>Luzula bulbosa</i> (Wood) Smyth & Smyth	Bulbous wood-rush	04-25-01	
LILIACEAE			
<i>Allium canadense</i> L.	Meadow garlic	07-03-01	
* <i>Allium vineale</i> L.	Crow garlic	04-25-01	
* <i>Narcissus</i> sp.	Narcissus	04-25-01	
<i>Polygonatum biflorum</i> (Walt.) Ell. var. <i>commutatum</i> (J.A. & J.H. Schultes) Morong	King Solomon'-seal	10-10-01	
ORCHIDACEAE			
<i>Cypripedium acaule</i> Ait.	Pink lady's-slipper	04-25-01	
POACEAE			
<i>Agrostis eliottiana</i> J.A. Schultes	Elliott's bent	05-23-01	AB 1902
<i>Agrostis hyemalis</i> (Walt.) B.S.P.	Winter bent	05-23-01	
<i>Agrostis perennans</i> (Walt.) Tuckerman	Upland bent	09-05-01	
* <i>Aira caryophylla</i> L.	Common silver-hair grass	04-25-01	
<i>Andropogon glomeratus</i> (Walt.) B.S.P.	Bushy bluestem	04-25-01	
<i>Andropogon ternarius</i> Michx.	Split-beard bluestem	10-03-01	
<i>Andropogon virginicus</i> L.	Broom-sedge	04-19-01	
* <i>Anthoxanthum odoratum</i> L.	Large sweet vernal grass	04-19-01	
<i>Aristida dichotoma</i> Michx.	Church-mouse three-awn	10-03-01	
<i>Aristida oligantha</i> Michx.	Prairie three-awn	09-05-01	
* <i>Bromus commutatus</i> Schrad.	Meadow brome	07-03-01	
<i>Calamagrostis coarctata</i> (Torr.) Eat. = <i>Calamagrostis cinnoides</i> W. Bart. nom. super.	Nuttall's reed grass	10-03-01	
<i>Chasmanthium laxum</i> (L.) Yates	Slender wood-oats	05-23-01	
<i>Cinna arundinacea</i> L.	Sweet wood-reed	10-03-01	
* <i>Cynodon dactylon</i> (L.) Pers	Bermuda grass	07-03-01	
* <i>Dactylis glomerata</i> L.	Orchard grass	04-25-01	
<i>Danthonia sericea</i> Nutt.	Silky wild oat grass	05-23-01	
<i>Danthonia spicata</i> (L.) Beauv. ex Roemer & J.A. Schultes	Poverty wild oat grass	04-25-01	
<i>Dichanthelium aciculare</i> (Desv. ex Poir.) Gould & C.A. Clark	Needle-leaf rosette grass	05-23-01	
<i>Dichanthelium acuminatum</i> (Sw.) Gould & C.A. Clark	Tapered rosette grass	05-23-01	
<i>Dichanthelium clandestinum</i> (L.) Gould	Deer-tongue rosette grass	05-23-01	
<i>Dichanthelium depauperatum</i> (Muhl.) Gould	Starved rosette grass	05-23-01	
<i>Dichanthelium dichotomum</i> (L.) Gould	Cypress rosette grass	05-23-01	
<i>Dichanthelium laxiflorum</i> (Lam.) Gould	Open-flower rosette grass	05-23-01	
<i>Dichanthelium scoparium</i> (Lam.) Gould	Broom rosette grass	05-23-01	
* <i>Digitaria ischaemum</i> (Schreb.) Schreb. ex Muhl.	Smooth crab grass	10-03-01	
* <i>Digitaria sanguinalis</i> (L.) Scop.	Hairy crab grass	09-05-01	
<i>Echinochloa nureicata</i> (Beauv.) Fern.	Rough barnyard grass	09-05-01	
<i>Elymus virginicus</i> L.	Virginia wild rye	09-05-01	
* <i>Eragrostis pilosa</i> (L.) Beauv.	Indian love grass	09-05-01	
<i>Eragrostis spectabilis</i> (Pursh) Steud.	Petticoat-climber	09-05-01	
<i>Glyceria striata</i> (Lam.) A.S. Hitchc.	Fowl manna grass	05-23-01	

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	COUNTY RECORD COLLECTION NO.
POACEAE (continued)			
<i>Hordeum pusillum</i> Nutt.	Little barley	05-23-01	
<i>Leersia oryzoides</i> (L.) Sw.	Rice cut grass	10-03-01	
<i>Leersia virginica</i> Willd.	White grass	09-05-01	
* <i>Lolium perenne</i> L. ssp. <i>multiflorum</i> (Lam.) Husnot = <i>Lolium multiflorum</i> Lam.	Perennial rye grass	05-23-01	
* <i>Lolium pratense</i> (Huds.) S.J. Darbyshire = <i>Festuca elatior</i> L. p.p. = <i>Festuca pratensis</i> Huds.	Meadow rye grass	05-23-01	
* <i>Microstegium vimineum</i> (Trin.) A. Camus	Nepalese browntop	09-05-01	
<i>Panicum anceps</i> Michx.	Beaked panic grass	09-05-01	
<i>Panicum dichotomiflorum</i> Michx.	Fall panic grass	09-05-01	
<i>Panicum rigidulum</i> var. <i>pubescens</i> (Vasey) Lelong = <i>Panicum longifolium</i> Torr.	Red-top panic grass	09-05-01	
<i>Panicum verrucosum</i> Muhl.	Warty panic grass	09-05-01	
* <i>Paspalum dilatatum</i> Poir.	Golden crown grass	07-03-01	
<i>Paspalum floridanum</i> Michx.	Florida crown grass	09-05-01	AB 1941
<i>Paspalum setaceum</i> Michx.	Slender crown grass	07-03-01	
* <i>Poa annua</i> L.	Annual blue grass	04-25-01	
* <i>Poa compressa</i> L.	Flat-stem blue grass	05-23-01	
<i>Poa pratensis</i> L.	Kentucky blue grass	05-23-01	
<i>Saccharum alopecuroidum</i> (L.) Nutt. = <i>Erianthus alopecuroides</i> (L.) Ell.	Silver plume grass	10-10-01	AB 1939
<i>Saccharum baldwinii</i> Spreng. = <i>Erianthus strictus</i> Ell.	Narrow plume grass	10-03-01	AB 1938
<i>Setaria parviflora</i> (Poir.) Kerguelen = <i>Setaria geniculata</i> auct. non (Wild.) Beauv.	Marsh bristle grass	09-05-01	
<i>Setaria pumila</i> (Poir.) Roemer & J.A. Schultes ssp. <i>pumila</i> = <i>Setaria glauca</i> (L.) Beauv. [Kartesz (1999) lists this taxon as <i>Pennisetum glaucum</i> (L.) R. Br.]	Pearl-millet	10-03-01	
<i>Sorghastrum nutans</i> (L.) Nash	Yellow Indian grass	10-10-01	
<i>Tridens flavus</i> (L.) A.S. Hitchc.	Tall redbtop	04-25-01	
* <i>Vulpia myuros</i> (L.) K.C. Gmel. = <i>Festuca myuros</i> L.	Rat-tail six-weeks grass	05-23-01	
SMILACACEAE			
<i>Smilax glauca</i> Walt.	Sawbrier	04-25-01	
<i>Smilax rotundifolia</i> L.	Horsebrier	04-25-01	

Table 2. Fauna of Virginia Army National Guard OMS No. 1 and No. 2 identified during DCR-DNH inventory, 2001-2002. The list is arranged by major groups: vertebrates followed by invertebrates. Families, genera, and species are arranged alphabetically. Taxa preceded by a ^c were collected; all others were identified by sight or sound in the field. Taxa followed by an asterisk (*) are potential county records (Carle, 1982; Opler et al., 1995). Dates are listed as month-day-year. See the Methods section for a key to the abbreviations for method of inventory. Nomenclature and identification sources included the following: American Ornithologists' Union (1998), Conant & Collins (1998), Covell (1984), Crother (2000), Dragonfly Society of the Americas (1996), Dunkle (2000), Glassberg (1999), Jenkins & Burkhead (1994), Kain (1987), Knisley & Schultz (1997), Linzey (1998), Miller (1992), Opler (1998), Page & Burr (1991), Peterson (1980), and Westfall & May (1996). Note that there is no standard list of common names for moths.

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	METHOD
FISH			
CENTRARCHIDAE			
^c <i>Acantharchus pomotis</i> (Baird)	Mud Sunfish	06-21-01	MN
^c <i>Enneacanthus gloriosus</i> (Holbrook)	Bluespotted Sunfish	06-21-01	MN
UMBRIDAE			
^c <i>Umbra pygmaea</i> (DeKay)	Eastern Mudminnow	06-21-01	MN
AMPHIBIANS			
BUFONIDAE			
^c <i>Bufo americanus</i> Holbrook	American Toad	08-13-01	HV
^c <i>Bufo fowleri</i> (Hinckley)	Fowler's Toad	06-18-01	HV
HYLIDAE			
^c <i>Acris crepitans</i> Baird	Northern Cricket Frog	06-29-01	HV
^c <i>Hyla chrysoscelis</i> Cope	Cope's Gray Treefrog	07-11-01	DF
<i>Hyla cinerea</i> (Schneider)	Green Treefrog	08-14-01	HV
^c <i>Pseudacris crucifer</i> (Wied-Neuwied)	Spring Peeper	09-20-01	DF
MICROHYLIDAE			
^c <i>Gastrophryne carolinensis</i> (Holbrook)	Eastern Narrowmouth Toad	06-19-01	DF
RANIDAE			
<i>Rana clamitans</i> Latreille	Green Frog	04-19-01	HV
<i>Rana palustris</i> LeConte	Pickerel Frog	08-01-01	HV
REPTILES			
CHELYDRIDAE			
<i>Chelydra serpentina</i> (Linnaeus)	Snapping Turtle	06-21-01	MN
COLUBRIDAE			
<i>Elaphe obsoleta</i> (Say)	Rat Snake	07-03-01	HV
<i>Heterodon platirhinos</i> Latreille	Eastern Hognose Snake	08-01-01	HV
EMYDIDAE			
<i>Clemmys guttata</i> (Schneider)	Spotted Turtle	08-14-01	HV
<i>Terrapene carolina</i> (Linnaeus)	Eastern Box Turtle	06-29-01	HV
KINOSTERNIDAE			
<i>Kinosternon subrubrum</i> (Lacepède)	Eastern Mud Turtle	08-14-01	HV
PHRYNOSOMATIDAE			
<i>Sceloporus undulatus</i> (Bosc & Daudin)	Eastern Fence Lizard	08-01-01	HV
SCINCIDAE			
<i>Eumeces inexpectatus</i> Taylor	Southeastern Five-lined Skink	04-15-02	CB
BIRDS			
ACCIPITRIDAE			
<i>Buteo jamaicensis</i> (Gmelin)	Red-tailed Hawk	06-29-01	HV
APODIDAE			
<i>Chaetura pelagica</i> (Linnaeus)	Chimney Swift	05-31-01	BD

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	METHOD
BIRDS (continued)			
BOMBYCILLIDAE			
<i>Bombycilla cedrorum</i> Vieillot	Cedar Waxwing	04-19-01	HV
CARDINALIDAE			
<i>Cardinalis cardinalis</i> (Linnaeus)	Northern Cardinal	05-31-01	BD
<i>Passerina cyanea</i> (Linnaeus)	Indigo Bunting	05-31-01	BD
CATHARTIDAE			
<i>Cathartes aura</i> (Linnaeus)	Turkey Vulture	04-19-01	HV
COLUMBIDAE			
<i>Zenaida macroura</i> (Linnaeus)	Mourning Dove	05-31-01	BD
CORVIDAE			
<i>Cyanocitta cristata</i> (Linnaeus)	Blue Jay	05-31-01	BD
CUCULIDAE			
<i>Coccyzus americanus</i> (Linnaeus)	Yellow-billed Cuckoo	06-29-01	BD
EMBERIZIDAE			
<i>Pipilo erythrophthalmus</i> (Linnaeus)	Eastern Towhee	05-31-01	BD
<i>Spizella passerina</i> (Bechstein)	Chipping Sparrow	05-31-01	BD
FRINGILLIDAE			
<i>Carduelis tristis</i> (Linnaeus)	American Goldfinch	05-31-01	BD
ICTERIDAE			
<i>Euphagus carolinus</i> (Muller)	Rusty Blackbird	04-15-02	BD
<i>Molothrus ater</i> (Boddaert)	Brown-headed Cowbird	05-31-01	BD
MIMIDAE			
<i>Dumetella carolinensis</i> (Linnaeus)	Gray Catbird	08-01-01	BD
<i>Mimus polyglottos</i> (Linnaeus)	Northern Mockingbird	05-31-01	BD
<i>Toxostoma rufum</i> (Linnaeus)	Brown Thrasher	04-19-01	BD
PARIDAE			
<i>Poecile carolinensis</i> (Audubon)	Carolina Chickadee	05-31-01	BD
<i>Baeolophus bicolor</i> (Linnaeus)	Tufted Titmouse	05-31-01	BD
PARULIDAE			
<i>Dendroica caerulescens</i> (Gmelin)	Black-throated Blue Warbler	10-23-01	HV
<i>Dendroica coronata</i> (Linnaeus)	Yellow-rumped Warbler	04-15-02	HV
<i>Dendroica discolor</i> (Vieillot)	Prairie Warbler	04-19-01	HV
<i>Dendroica pinus</i> (Wilson)	Pine Warbler	05-31-01	BD
<i>Geothlypis trichas</i> (Linnaeus)	Common Yellowthroat	04-19-01	HV
<i>Mniotilta varia</i> (Linnaeus)	Black-and-white Warbler	05-31-01	BD
<i>Oporornis formosus</i> (Wilson)	Kentucky Warbler	09-06-01	HV
<i>Protonotaria citrea</i> (Boddaert)	Prothonotary Warbler	09-06-01	HV
<i>Seiurus aurocapillus</i> (Linnaeus)	Ovenbird	05-31-01	BD
<i>Wilsonia citrina</i> (Boddaert)	Hooded Warbler	05-31-01	BD
PICIDAE			
<i>Colaptes auratus</i> (Linnaeus)	Northern Flicker	05-31-01	BD
<i>Dryocopus pileatus</i> (Linnaeus)	Pileated Woodpecker	09-18-01	HV
<i>Melanerpes carolinus</i> (Linnaeus)	Red-bellied Woodpecker	05-31-01	BD
<i>Picoides pubescens</i> (Linnaeus)	Downy Woodpecker	08-01-01	HV
<i>Picoides villosus</i> (Linnaeus)	Hairy Woodpecker	09-06-01	HV
REGULIDAE			
<i>Regulus calendula</i> (Linnaeus)	Ruby-crowned Kinglet	04-19-01	HV
<i>Regulus satrapa</i> Lichtenstein	Golden-crowned Kinglet	06-29-01	HV

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	METHOD
BIRDS (continued)			
SITTIDAE			
<i>Sitta carolinensis</i> Latham	White-breasted Nuthatch	05-31-01	BD
STURNIDAE			
<i>Sturnus vulgaris</i> Linnaeus	European Starling	05-31-01	BD
SYLVIIDAE			
<i>Polioptila caerulea</i> (Linnaeus)	Blue-gray Gnatcatcher	05-31-01	BD
THRAUPIDAE			
<i>Piranga rubra</i> (Linnaeus)	Summer Tanager	05-31-01	BD
TROGLODYTIDAE			
<i>Thryothorus ludovicianus</i> (Latham)	Carolina Wren	05-31-01	BD
TURDIDAE			
<i>Hylocichla mustelina</i> (Gmelin)	Wood Thrush	05-31-01	BD
<i>Sialia sialis</i> (Linnaeus)	Eastern Bluebird	05-31-01	BD
<i>Turdus migratorius</i> Linnaeus	American Robin	05-31-01	BD
TYRANNIDAE			
<i>Contopus virens</i> (Linnaeus)	Eastern Wood-pewee	05-31-01	BD
<i>Myiarchus crinitus</i> (Linnaeus)	Great Crested Flycatcher	05-31-01	BD
<i>Sayornis phoebe</i> (Latham)	Eastern Phoebe	05-31-01	BD
<i>Tyrannus tyrannus</i> (Linnaeus)	Eastern Kingbird	05-31-01	BD
VIREONIDAE			
<i>Vireo olivaceus</i> (Linnaeus)	Red-eyed Vireo	05-31-01	BD
MAMMALS			
CERVIDAE			
<i>Odocoileus virginianus</i> (Zimmermann)	White-tailed Deer	05-31-01	HV
MURIDAE			
<i>Peromyscus leucopus</i> (Rafinesque)	White-footed Mouse	06-19-01	SH
PROCYONIDAE			
<i>Procyon lotor</i> (Linnaeus)	Raccoon	05-31-01	HV
SCIURIDAE			
<i>Sciurus carolinensis</i> Gmelin	Gray Squirrel	05-31-01	HV
<i>Tamias striatus</i> (Linnaeus)	Eastern Chipmunk	05-31-01	HV
VESPERTILIONIDAE			
<i>Lasiurus borealis</i> (Muller)	Red Bat	08-14-01	MT
COLEOPTERA (BEETLES)			
CICINDELIDAE			
^c <i>Cicindela rufiventris</i> Dejean	A tiger beetle	08-01-01	SW
^c <i>Cicindela sexguttata</i> Fabricius	A tiger beetle	04-19-01	SW
LEPIDOPTERA (BUTTERFLIES, SKIPPERS, and MOTHS)			
ARCTIIDAE			
^c <i>Cisseps fulvicollis</i> (Hübner)		05-31-01	UV
^c <i>Cisthene plumbea</i> Stretch		08-15-01	UV
^c <i>Clemensia albata</i> Packard		09-07-01	UV
^c <i>Crambidia uniformis</i> Dyar		09-20-01	UV
^c <i>Grammia parthenice intermedia</i> (Stretch)		09-19-01	UV
^c <i>Grammia phyllira</i> (Drury)		09-20-01	UV
^c <i>Haploa clymene</i> (Brown)		07-11-01	UV
^c <i>Hypoprepia fucosa</i> Hübner		08-15-01	UV
^c <i>Pyrrharctia Isabella</i> (J. E. Smith)		08-15-01	UV
^c <i>Spilosoma congrua</i> Walker		05-16-01	UV

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	METHOD
LEPIDOPTERA (continued)			
DREPANIDAE			
° <i>Oreta rosea</i> (Walker)		05-31-01	UV
GEOMETRIDAE			
° <i>Anacaenodes vellivolata</i> (Hulst)		05-16-01	UV
° <i>Besma quercivoraria</i> (Guenée)		05-16-01	UV
° <i>Caupaea perlata</i> (Guenée)		05-16-01	UV
° <i>Costaconvexa centrostrigaria</i> (Wollaston)		08-15-01	UV
° <i>Cyclophora pendulinaria</i> (Guenée)		08-14-01	UV
° <i>Enchlaena obtusaria</i> (Hübner)		05-16-01	UV
° <i>Ensarca confusaria</i> Hübner		05-31-01	UV
° <i>Glena cribrataria</i> (Guenée)		05-16-01	UV
° <i>Hypagyrtis esther</i> (Barnes)		08-15-01	UV
° <i>Hypagyrtis unipunctata</i> (Haworth)		05-16-01	UV
° <i>Hypomecis gnopharia</i> (Guenée)		08-15-01	UV
° <i>Laubdina athasaria</i> (Walker) complex		08-14-01	UV
° <i>Melanolophia caudaria</i> (Guenée)		09-19-01	UV
° <i>Metarranthis hypocharia</i> (Herrich-Schäffer)		06-19-01	UV
° <i>Patalene olyzonaria puber</i> (Grote & Robinson)		06-19-01	UV
° <i>Plagodis alcoolaria</i> (Guenée)		08-15-01	UV
° <i>Prochoerodes transversata</i> (Drury)		09-21-01	UV
° <i>Scopula inductata</i> (Guenée)		05-16-01	UV
° <i>Scopula limbomidata</i> (Haworth)		05-31-01	UV
° <i>Semiothisa aemulataria</i> (Walker)		05-16-01	UV
° <i>Semiothisa gnophosaria</i> (Guenée)		09-20-01	UV
HESPERIIDAE			
° <i>Ancyloxypha numitor</i> (Fabricius)	Least skipperling	09-06-01	SW
° <i>Atalopedes campestris</i> (Boisduval)*	Sachem	09-06-01	SW
° <i>Euphyes vestris</i> (Boisduval)*	Dun skipper	06-19-01	SW
° <i>Lerema accius</i> (Smith)*	Clouded skipper	09-06-01	SW
° <i>Nasira theminier</i> (Latreille)	Swarthy skipper	06-19-01	SW
° <i>Poanes viator zizaniae</i> Shapiro*	Broad wing skipper	09-06-01	SW
° <i>Poanes zabulon</i> (Boisduval & Leconte)*	Zabulon skipper	06-19-01	SW
° <i>Polites origenes</i> (Fabricius)*	Crossline skipper	09-06-01	SW
° <i>Polites themistocles</i> (Latreille)*	Tawny-edged skipper	08-16-01	SW
° <i>Pompeius verna</i> (Edwards)	Little glassywing	09-18-01	SW
° <i>Pyrgus communis</i> (Grote)*	Common checkered skipper	10-23-01	SW
° <i>Thorybes bathyllus</i> (Smith)*	Southern cloudywing	08-01-01	SW
LYCAENIDAE			
° <i>Calycopis cecrops</i> (Fabricius)	Red-banded hairstreak	05-15-01	SW
° <i>Everes comyntas</i> (Godart)	Eastern tailed blue	06-29-01	SW
NOCTUIDAE			
° <i>Abagrotis alternata</i> (Grote)		09-21-01	UV
° <i>Acronicta inclara</i> Smith complex		05-16-01	UV
° <i>Agrotis ipsilon</i> (Hufnagel)		05-16-01	UV
° <i>Allotria elonympha</i> (Hübner)		08-14-01	UV
° <i>Amphipyra pyramidoides</i> Guenée		08-15-01	UV
° <i>Aniela infecta</i> (Ochs.)		09-20-01	UV
° <i>Anorthodes tarda</i> (Guenée)		05-16-01	UV
° <i>Arugisa latiotella</i> (Walker)		09-07-01	UV
° <i>Bleptina caradrinalis</i> Guenée		05-16-01	UV
° <i>Caenurgis chlorophis</i> (Hübner)		08-15-01	UV
° <i>Chytolita morbidalis</i> (Guenée)		05-16-01	UV
° <i>Chytonix palliatricula</i> (Guenée)		05-16-01	UV
° <i>Cirrhoplumus triangulifer</i> Grote		09-07-01	UV
° <i>Condica videns</i> (Guenée)		09-18-01	UV
° <i>Elaphria festivooides</i> (Guenée)		05-16-01	UV
° <i>Elaphria grata</i> Hübner		08-14-01	UV
° <i>Feltia herilis</i> (Grote)		09-18-01	UV
° <i>Galgula partita</i> Guenée		08-15-01	UV

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	METHOD
LEPIDOPTERA (continued)			
NOCTUIDAE (continued)			
° <i>Hypena baliuoralis</i> Guenée		08-15-01	UV
° <i>Hypena manalis</i> Walker		06-19-01	UV
° <i>Hypena scabra</i> (Fabricius)		05-31-01	UV
° <i>Idia aemula</i> Hübner		08-15-01	UV
° <i>Idia americalis</i> (Guenée)		08-15-01	UV
° <i>Idia scobialis</i> (Grote)		08-15-01	UV
° <i>Lacinipolia laudabilis</i> (Guenée)		09-18-01	UV
° <i>Lacinipolia renigera</i> (Stephens)		05-16-01	UV
° <i>Lithacodia muscosula</i> (Guenée)		08-15-01	UV
° <i>Meganola phylla</i> (Dyar)		05-16-01	UV
° <i>Meropleon diversicolor diversicolor</i> (Morrison)		09-20-01	UV
° <i>Nedra ramosula</i> (Guenée)		09-19-01	UV
° <i>Ogdoconta cinereola</i> (Guenée)		09-20-01	UV
° <i>Orthodes crenulata</i> (Butler)		05-16-01	UV
° <i>Paectes abrostoloides</i> (Guenée)		08-13-01	UV
° <i>Palthis angulalis</i> (Hübner)		08-15-01	UV
° <i>Palthis asopialis</i> (Guenée)		08-15-01	UV
° <i>Pangrapta decoralis</i> Hübner		06-19-01	UV
° <i>Phalaenostola larentioides</i> Grote		09-07-01	UV
° <i>Phosphila miselioides</i> (Guenée)		06-19-01	UV
° <i>Plathypena scabra</i> (Fabricius)		08-15-01	UV
° <i>Polygrammatē hebraeicum</i> Hübner		05-16-01	UV
° <i>Pseudaletia mipuncta</i> (Haworth)		08-15-01	UV
° <i>Redectis vitrea</i> (Grote)		08-15-01	UV
° <i>Renia sobrialis</i> (Walker)		09-19-01	UV
° <i>Renia</i> sp. near <i>discoloralis</i> Guenée		08-15-01	UV
° <i>Spodoptera ornithogalli</i> (Guenée)		08-14-01	UV
° <i>Sutyria privata teltowa</i> (Smith)		09-19-01	UV
° <i>Tetanolita mynesalis</i> (Walker)		08-15-01	UV
° <i>Thioptera nigrofimbria</i> (Guenée)		08-15-01	UV
° <i>Ulonche culea</i> (Guenée)		05-16-01	UV
° <i>Xestia dolosa</i> Franclemont		08-15-01	UV
° <i>Zale horrida</i> Hübner		05-16-01	UV
° <i>Zale lunata</i> (Drury)		08-15-01	UV
NOTODONTIDAE			
° <i>Clostera inclusa</i> (Hübner)		08-15-01	UV
° <i>Heterocampa obliqua</i> Packard		06-19-01	UV
° <i>Heterocampa umbrata</i> Walker		06-19-01	UV
° <i>Hyperaeschra georgica</i> (Herrich-Schäffer)		05-16-01	UV
° <i>Lochmaeus mauteo</i> Doubleday		08-15-01	UV
° <i>Nadata gibbosa</i> (J. E. Smith)		05-16-01	UV
° <i>Oligocentria lignicolor</i> (Walker)		09-07-01	UV
° <i>Peridea angulosa</i> (J. E. Smith)		09-20-01	UV
° <i>Symmerista albifrons</i> (J. E. Smith) complex		08-14-01	UV
NYMPHALIDAE			
° <i>Cercyonis pegala</i> (Fabricius)*	Large wood nymph	06-29-01	SW
° <i>Cyllopsis gemma</i> (Hübner)	Gemmed satyr	09-06-01	SW
° <i>Danaus plexippus</i> (Linnaeus)	Monarch	09-18-01	HV
° <i>Enodia anthedon</i> (Clark)	Northern pearly eye	09-21-01	SW
° <i>Hermeuptychia sosybius</i> (Fabricius)	Carolina satyr	07-11-01	SW
° <i>Junonia coenia</i> Hübner*	Buckeye	07-11-01	SW
° <i>Linneitis arthemis astyanax</i> (Fabricius)	Red spotted purple	07-11-01	HV
° <i>Megisto cymela</i> (Cramer)*	Little wood satyr	05-31-01	SW
° <i>Nymphalis antiopa</i> (Linnaeus)	Mourning cloak	05-31-01	HV
° <i>Phycodes tharos</i> (Drury)*	Southern pearly crescent spot	07-11-01	SW
° <i>Polygonia comma</i> (Harris)	Comma	05-31-01	HV
° <i>Satyroides appalachia</i> (Chermock)	Appalachian brown	06-29-01	SW
° <i>Vanessa atalanta</i> (Linnaeus)*	Red admiral	05-31-01	HV
° <i>Vanessa cardui</i> (Linnaeus)	Painted lady	09-06-01	HV
° <i>Vanessa virginiensis</i> (Drury)*	American painted lady	05-31-01	HV

GROUP/FAMILY SCIENTIFIC NAME	COMMON NAME	DATE FIRST OBSERVED	METHOD
LEPIDOPTERA (continued)			
PAPILIONIDAE			
<i>Papilio glaucus</i> Rothschild & Jordan	Tiger swallowtail	06-19-01	HV
<i>Papilio troilus</i> (Linnaeus)	Spicebush swallowtail	08-13-01	HV
PIERIDAE			
<i>Anthocharis midea</i> (Hübner)	Falcate orangetip	04-19-01	SW
<i>Colias eurytheme</i> Boisduval	Orange sulphur	08-14-01	SW
<i>Phoebis sennae</i> (Linnaeus)	Cloudless giant sulphur	09-06-01	HV
SATURNIIDAE			
^c <i>Dryocampa rubicunda</i> (Fabricius)		08-15-01	UV
SPHINGIDAE			
^c <i>Dolba lyloeus</i> (Drury)		08-13-01	UV
^c <i>Lapara bombycoides</i> Walker		08-15-01	UV
^c <i>Paonias excaecatus</i> (J. E. Smith)		08-15-01	UV
ODONATA (DRAGONFLIES and DAMSELFLIES)			
AESHNIDAE			
<i>Anax junius</i> (Drury)	Common green darner	06-18-01	HV
^c <i>Epiaschua heros</i> (Fabricius)*	Swamp darner	07-11-01	SW
COENAGRIONIDAE			
<i>Ischnura posita</i> (Hagen)	Fragile forktail	06-29-01	SW
CORDULIIDAE			
^c <i>Epitheca cynosura</i> (Say)*	Common baskettail	04-19-01	SW
^c <i>Somatochlora linearis</i> (Hagen)*	Mocha emerald	08-16-01	SW
LIBELLULIDAE			
^c <i>Celithemis elisa</i> (Hagen)*	Calico pennant	05-31-01	SW
^c <i>Erythemis simplicicollis</i> (Say)	Eastern pondhawk	06-29-01	SW
^c <i>Libellula cyanea</i> Fabricius	White-spangled skimmer	06-29-01	SW
^c <i>Libellula flavida</i> Rambur*	Yellow-sided skimmer	06-29-01	SW
^c <i>Libellula incesta</i> Hagen	Slaty skimmer	07-11-01	SW
<i>Libellula lydia</i> Drury	Common whitetail	06-18-01	SW
<i>Libellula needhami</i> Westfall*	Needham's skimmer	09-06-01	SW
^c <i>Libellula semifasciata</i> Burmeister	Painted skimmer	06-29-01	SW
^c <i>Libellula vibrans</i> Fabricius	Great blue skimmer	06-29-01	SW
^c <i>Pachydiplax longipennis</i> (Burmeister)	Blue dasher	06-29-01	SW
<i>Pantala flavescens</i> (Fabricius)	Wandering glider	09-18-01	SW
^c <i>Pantala hymenaea</i> (Say)	Spot-winged glider	08-13-01	SW
^c <i>Sympetrum vicinum</i> (Hagen)*	Yellow-legged meadowfly	10-04-01	SW

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